Remarks

The non-final Office Action dated November 20, 2007, lists the following rejections: claims 1-11 stand rejected under 35 U.S. C. § 102(b) over Engeler *et al.* (U.S. Patent No. 3,614,678) and claims 3-11 stand rejected under 35 U.S. C. § 103(a) over Engeler in view of Niu *et al.* (U.S. Patent Pub. No. 2003/0052742)

Applicant respectfully submits that the § 102(b) rejection of claims 1-11 cannot stand because the cited portions of the Engeler reference fail to correspond to the claimed invention. As a first example, the cited portions of Engeler do not correspond to aspects of the claimed invention directed to a resonator element that includes a deformation-free part arranged as claimed. The cited portions of Engeler do not teach that there is a deformation-free part in low resistivity regions 20 or in U-shaped piezoresistive region 13. *See, e.g.,* Figure 6. More specifically, Engeler teaches that the maximum strain occurs in the center of beam 17 (where U-shaped piezoresistive region 13 is located), and strain of the opposite sense occurs in the vicinity of the ends of the beam, which contain low resistivity regions 20 (*i.e.,* a small resistance change is caused in the low resistivity regions 20 by stain). *See, e.g.,* Col. 6:46-54. Thus, the cited portions of Engeler do not teach that there is a deformation-free part, as claimed, in low resistivity regions 20 or in U-shaped piezoresistive region 13.

As a second example, the cited portions of Engeler do not correspond to aspects of the claimed invention directed to a resonator element that includes first and second parts that extend from opposite sides of the deformation-free part, with the resonator element being attached to the substrate only in the deformation-free part. The cited portions of Engeler do not teach that there is any part of low resistivity regions 20 or U-shaped piezoresistive region 13 that is attached to crystal 10 and that has first and second parts that extend thereform as claimed. *See, e.g.,* Figures 6 and 7.

In view of the above, the cited portions of the Engeler reference do not correspond to the claimed invention. Accordingly, Applicant requests that the § 102(b) rejection of claims 1-11 be withdrawn.

Applicant respectfully traverses the § 103(a) rejections of claims 3-11 because the Office Action relies upon improper conclusory statements in asserting obviousness, thereby directly contradicting the U.S.P.T.O. guidelines for maintaining an obviousness

rejection under KSR ("Rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."). *See KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (U.S. 2007). In this instance, the Office Action simply concludes that the limitations of claims 3-11 would have been obvious based on "engineering design variance". While it is not entirely clear what is meant by "engineering design variance" (which has no basis in the M.P.E.P.), the Office Action appears to be asserting that such a change would be a matter of design choice for the Engeler reference. However, the Office Action has not provided any motivation or reason for modifying the Engeler reference. This approach is contrary to the requirements of § 103 and relevant law. *See, e.g., KSR,* 127 S. Ct. at 1741 ("A patent composed of several elements is not proved obvious merely by demonstrating that each element was, independently, known in the prior art."), *see, also* M.P.E.P. § 2144.04(VI)(C). Accordingly, the § 103(a) rejections of claims 3-11 is improper and Applicant requests that it be withdrawn.

Applicant further traverses the § 103(a) rejections of claims 3-11 because the Office Action appears to be relying upon the Niu reference, however, no citations to the Niu reference are provided. In accordance with M.P.E.P. § 706 and 37 C.F.R. 1.104, when a reference is complex or shows or describes inventions other than that claimed by the applicant, the particular part relied on must be designated as nearly as practicable. In this instance, the Office Action simply states that Niu "shows various shapes of MEMS resonators include a ring shape." However, the Office Action does not provide any indication of what part of Niu is being relied on, or provide any explanation regarding how or why the Office Action is proposing to combine some unidentified portion of Niu with the Engeler reference. Accordingly, the § 103(a) rejections of claims 3-11 is improper and Applicant requests that it be withdrawn. Should any rejection based upon the Niu reference be maintained, Applicant requests clarification and an opportunity to respond thereto.

Applicant has added new claims 12-14, which depend from claim 1. Applicant respectfully submits that claims 12-14 are in condition for allowance over the cited

references for at least the reasons discussed above, in connection with their respective underlying (independent) claims.

In view of the remarks above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of NXP Corporation at (408) 474-9063 (or the undersigned).

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